

REMARKS

I. PRIORITY/DECLARATION

Applicant respectfully requests that the priority for the present application be corrected to properly claim priority to International application no. PCT/JP00/08778 filed on December 12, 2000, which further claims priority to Japanese patent application nos.: 11(99)/352970 filed on December 13, 1999 and 2000/16860 filed on January 26, 2000. The present application is a continuation application of a PCT application in accordance with 35 U.S.C. 365(c) and 120, filed before the abandonment of the PCT application. A copy of Form PCT/IB/308 Notice Informing the Applicant of the Communication of the International Application to the U.S. as a Designated Office, is enclosed. The Specification has been amended to include an appropriate reference to the prior PCT application in the first sentence. In addition, the inventors submit a new declaration identifying the present application along with a supplemental Application Data Sheet identifying the correct priority data in accordance with 37 C.F.R. 1.76.

II. STATUS OF THE SPECIFICATIONS

Applicant respectfully requests that the first sentence of the specifications on page 1, be amended to indicate that the present application had been intended as a continuation of a PCT application as amended above, in compliance with 35. U.S.C. 120.

III. STATUS OF THE CLAIMS

Claims 1-29 were pending. After entry of the above amendments, Claims 1-29 are pending in the present Application. In the above amendments, Claims 1, 4-8, 12, 14-26 were amended and claims 27-29 were withdrawn for being drawn to a non-elected invention.

Claim 26 was rejected in the Office Action under 35 U.S.C. § 112, second paragraph ("Section 112, Para. 2") as having insufficient antecedent basis of a limitation in the claim.

Claims 4-25 were objected to under 37 CFR 1.75(c) as being in improper multiple dependent claim form.

Claims 1-3 were rejected under 35 U.S.C. § 102(b) ("Section 102(b)") as being anticipated by Taniguchi et al. (U.S. Pat. No. 4,374,158) (hereinafter referred to as "Taniguchi").

Claims 1-3 were rejected under Section 102(b) as being anticipated by Japanese Patent Application Publication no. 11-292568 (JP '568).

Claim 26 was rejected under 35 U.S.C. § 103(a) ("Section 103(a)") as being unpatentable over Taniguchi et al. (U.S. Pat. No. 4,374,158).

Applicant respectfully traverses all rejections and requests reconsideration.

**A. REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH**

Claim 26 has been amended to provide proper antecedent basis for the cited limitation and now properly reads "said glass substrate".

Accordingly, Applicant respectfully requests withdrawal of the rejection of claim 26 under Section 112, second paragraph.

**B. CLAIM OBJECTIONS OF CLAIMS 4-25**

Claims 4-25 have been objected to for being in improper multiple dependent claim format. Claims 4-8, 12, and 14-25 have now been amended to depend from claim 1 and no longer use multiple dependent claims. Accordingly, Applicant respectfully requests withdrawal of the objections to claims 4-25 and requests that these claims be treated on their merits.

**C. REJECTION UNDER SECTION 102(b), TANIGUCHI ET AL.**

Claims 1-3 were rejected under Section 102(b) as being anticipated by Taniguchi.

Taniguchi et al. (hereinafter "Taniguchi")

Taniguchi discusses a transparent shaped article having an enhanced antireflective effect by treating with an activated gas the surface of a transparent shaped article having a surface layer containing a finely divided particulate inorganic substance having an average particle size of from about 1 to about 300 millimicrons. (Taniguchi, Abstract) Taniguchi teaches that the surface layer is prepared by coating the article with a coating material having a hydrolyzed organic compound and a subsequently added particulate inorganic substance. (Taniguchi, Examples 1-30).

Claim 1

Independent claim 1 has been amended to recite that the "binder is composed of metal compounds" and mixing a "hydrolyzable metal compound in a state before hydrolyzation" (underline for emphasis). Amended claim 1 further originally recites that the coating solution is prepared by "hydrolyzing the hydrolyzable metal compound in the presence of the starting fine particles".

Such support for the amendment is found in specification of the present application which points out that hydrolyzable metal compound is hydrolyzed in the presence of silica fine particles which results in improved mechanical strength of the resulting film as opposed to hydrolysis of the metal compound prior to addition of the silica fine particles. (Application, page 9, line 16-page 10). Taniguchi do not disclose that a hydrolyzable metal compound is hydrolyzed in the presence of silica fine particles but rather teaches that organic compounds/organosilicon compounds and high polymers of these compounds are first hydrolyzed and then a dispersion of silicon oxide type fine particles are added to this hydrolyzed solution. In essence, Taniguchi fail to disclose the required limitation of amended claim 1, that a coating solution is prepared by mixing "a hydrolyzable metal compound in a state before hydrolyzation" with starting fine particles, water and solvent, "and then hydrolyzing the hydrolyzable metal compound in the presence of the starting fine particles."

In addition, Taniguchi further fail to recite the limitation in amended claim 1 that the silica fine particles to binder weight ratio proportion is "60:40 to 95:5".

Taniguchi only makes mention of a 5-80% by weight amount of the particulate inorganic substance to the transparent material and further teaches that an amount larger than 80% by weight would have the negative effect of forming cracks and reducing transparency. Applicant's claim 1 recites both a narrower range and a fine silica particle weight amount not anticipated by Taniguchi (% above 80%).

Accordingly, Taniguchi did not anticipate claim 1. For the above reasons, Applicant respectfully submits that claim 1 is patentable over Taniguchi.

JP-11-292568 (hereinafter "JP '568")

JP '568 discloses coating a surface of glass substrate with a film comprising chain silica fine particles, silicon compound, water, an acid catalyst, a dispersion assistant and a solvent. (JP '568 Abstract). The organosilicon compound is hydrolyzed in a solvent and chain-like silica particle is distributed in this hydrolyzed solvent. (JP '568, [0027]).

Claim 1

As mentioned above Independent claim 1 has been amended to recite that the "binder is composed of metal compounds" and mixing a "hydrolyzable metal compound in a state before hydrolyzation" (underline for emphasis). Amended claim 1 further originally recites that the coating solution is prepared by "hydrolyzing the hydrolyzable metal compound in the presence of the starting fine particles".

JP '568 does not disclose that a hydrolyzable metal compound is hydrolyzed in the presence of silica fine particles but rather teaches that organosilicon compounds are first hydrolyzed and then a dispersion of chain-like silica particle are added to this hydrolyzed solvent. Therefore, JP '568 fails to disclose the required limitation of amended claim 1, that a coating solution is prepared by mixing "a hydrolyzable metal compound in a state before hydrolyzation" with starting fine particles, water and solvent, "and then hydrolyzing the hydrolyzable metal compound in the presence of the starting fine particles."

Accordingly, JP '568 did not anticipate claim 1. For the above reasons, Applicant respectfully submits that claim 1 is patentable over JP '568.

Claims 2 and 3

Dependent claims 2 and 3 include all limitations of their respective base claim 1. Accordingly, Applicant respectfully submits that these dependent claims are all allowable for at least the same reasons as is claim 1. Furthermore, Applicant respectfully submits that these dependent claims are further allowable for the limitations that they themselves recite.

Applicant respectfully disagrees with the assertions regarding the dependent claims from the Office Action. The assertions have been made moot by the above discussion of the base claim.

For the above reasons, Applicant respectfully requests withdrawal of the rejection of Claims 1-3 under Section 102(b).

D. REJECTION UNDER SECTION 103(a), TANIGUCHI ET AL.

Claim 26 was rejected under Section 103(a) as obvious over Taniguchi. In rejecting claim 26 as being unpatentable over Taniguchi, the Examiner stated in part that "[b]ecause the anti-reflective film of Taniguchi et al. has the compositional limitations of the film as claimed by Applicant as well as increasing the total light transmittance of a coated glass substrate versus an uncoated glass substrate, there is no patentable distinction over the prior art of record." (Office Action, pg. 6-7).

Applicant respectfully traverses Examiner's rejection as explained below.

Claim 26, Taniguchi

As explained in M.P.E.P. Section 706.02(j):

*To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in*

*the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.*

The three above-mentioned criteria must exist at the time the claimed invention was made, according to the text of Section 103(a) itself. The Examiner has not established a prima facie case of obviousness using Taniguchi for at least the reasons stated below.

Applicant requires in amended claim 26 that the binder is coated "onto said silica fine particles to a thickness of 1-100 nm after undergoing hydrolyzation in the presence of the silica fine particles". However, Taniguchi do not teach such an element that the binder undergoes hydrolysis in the presence of the silica fine particles. In fact, Taniguchi teaches that its "binder" is a hydrolyzed solution prior to the addition of the silica particles. As such, Taniguchi fails to have the compositional limitations of the film as claimed by Applicant.


Therefore, Taniguchi et al. fail to teach or suggest ALL claim limitations as required to establish a prima facie case of obviousness. Accordingly, Applicant respectfully requests withdrawal of the rejection of Claim 26 under Section 103(a).

IV. CONCLUSION

The above-discussed amendments and remarks are believed to place the present Application in condition for allowance. Should the Examiner have any questions regarding the above amendments, the Examiner is requested to telephone Applicant's representative at the number listed below.

Respectfully submitted,

Date: 5/24/2014

  
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## PATENT COOPERATION TREATY

PCT

NOTICE INFORMING THE APPLICANT OF THE  
COMMUNICATION OF THE INTERNATIONAL  
APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

From the INTERNATIONAL BUREAU

To:  
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15-2, Nihonbashi 3-chome  
Chuo-ku, Tokyo 103-0027  
JAPON

Date of mailing (day/month/year) 14 June 2001 (14.06.01)		
Applicant's or agent's file reference PC3252		IMPORTANT NOTICE
International application No. PCT/JP00/08778	International filing date (day/month/year) 12 December 2000 (12.12.00)	Priority date (day/month/year) 13 December 1999 (13.12.99)
Applicant NIPPON SHEET GLASS.CO., LTD. et al		

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:

US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:

EP

The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on 14 June 2001 (14.06.01) under No. WO 01/42155

**REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)**

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

**REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))**

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

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